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# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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July 28, 2011

TO: Internal File

THRU: Joe Helfrich, Team Lead 

FROM: Priscilla Burton, CPSSc, Environmental Scientist III *PWB m/sas*

RE: Permit Area Modification, Trail Mountain, Pacificorps, Emery County, C/015/0009, Task ID #3858.

### SUMMARY:

The application to remove 2,765 acres of relinquished coal lease area and retain 774 acres within the lease area (Sec. 3.3.7) was received at the Price Field Office on June 16, 2011. The surface disturbed/permit area is 10.39 acres (Sec. 1.3) on fee land within the Manti La Sal National Forest (Plate 3-4). The mine portals were sealed in May 2001, at which time; the Permittee notified the Division of Temporary Cessation status (Section 3.3.6.4). The Trail Mountain MRP has not been revised since 1995. This application makes no changes to the soils handling plan.

Based upon my review of the soils information, there should be one change made to the soil sampling plan:

**R645-301-121.100**, After grading, soils will be sampled and analyzed as described in App 9-1, Attach. C. Samples will be analyzed for suitability parameters described in the Utah Guidelines for Topsoil and Overburden. An outdated reference is used in Chap 3, p. 58 which should be updated to read "Table 3 of the 2008 Division Overburden and Soil Handling Guidelines." [PWB]

And there should be one addition to the reclamation plan:

**R645-301-121.100 and R645-301-244.200**, In the years since the Trail Mountain reclamation plan was written (1980's), the Division has observed that the incorporation of 1T/ac straw into the surface soil with roughening to a superior technique that should be added to the reclamation plan. [PWB]

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**TECHNICAL ANALYSIS:**

**ENVIRONMENTAL RESOURCE INFORMATION**

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

**GENERAL**

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

**Analysis:**

The mine site is situated on fee land (Section 4.3.1.1 and Plate 4-1) at an elevation of 7,300 ft., on a slope adjacent to Cottonwood Creek, a perennial stream. The stream has been culverted and runs below the mine yard. County Road 506, the Cottonwood Creek Road runs along the eastern boundary of the permit area. The Manti La Sal National Forest land borders the mine site the remaining sides (Plate 3-1 and Section 4.3.1.3).

Plate 3-1 shows 8 portals in the disturbed area, with several being sealed. Mining occurred in the Hiawatha seams (Section 3.3.1.1) as shown on Plate 3-2.

The current and post mining land use is undeveloped rangeland (wildlife) and livestock grazing (Section 4.4.2.1). The average annual precipitation is 13 inches (Table 7-12), based upon historic data recorded at the East Mountain site (section 7.4.1).

**Findings:**

The information provided meets the requirements of the Rules for general resource information.

**SOILS RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

**Analysis:**

Section 3.1 describes a 10.39 acre disturbance for the mine facilities area. Surface Facilities are shown on Plate 3-1. No changes have been made to this Plate. Soils and test plots

are described in Appendices to Chapters 8 and 9. No changes have been made to Volume 4 Appendices.

**Findings:**

The information provided meets the requirements for baseline soil survey information as required by the R645 Coal Rules.

## **OPERATION PLAN**

### **TOPSOIL AND SUBSOIL**

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

**Analysis:**

#### **Topsoil Removal and Storage**

The disturbed area is 10.39 acres. A single topsoil pile (Section 3.5.2) occupies 37 ft. x 75 ft. as shown on Plate 3-1 Surface Facilities. The pile is protected by a silt fence and vegetation. No volume estimates are provided. The soil was obtained from the surface of an adjacent borrow pit, used to gain fill for culvert installation.

**Findings:**

The information provided in the application meets the requirements of the R645 Coal Rules for Soils Handling Operation Plan.

## **RECLAMATION PLAN**

### **TOPSOIL AND SUBSOIL**

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

**Analysis:**

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### **Redistribution**

Operational contours are shown on Plate 3-1 Surface Facilities. Reclamation slopes will be configured as shown on Plate 3-5 Post Mining Topography. Cross sections of the existing and post mining topography are shown on Plates 3-6, 1 of 2 and 2 of 2; cross-section locations are shown on Plates 3-5. Terraces created by the ancillary roads may be retained as described in Section 3.5.4.2 to protect Cottonwood Creek. The sediment pond will be retained until Phase II reclamation (Sec. 3.5.3.3).

Grading will begin with removal of contaminated material and coal fines (Section 3.5.5.1), including saline soils as monitored according to Appendices to Chapters 8 and 9. Compacted areas will be deep- ripped to a depth of 12 – 24 inches (Sec. 3.5.4.1). Topsoil stored in the stockpile will be spread to a thickness of 6 inches over a portion of the site (Sec 3.5.4). After grading, soils will be sampled and analyzed as described in App 9-1, Attach. C. Samples will be analyzed for suitability parameters described in the Utah Guidelines for Topsoil and Overburden. An outdated reference is used in Chap 3, p. 58 which should be updated to read “Table 3 of the 2008 Division Overburden and Soil Handling Guidelines.”

Further fertility amendments will be dependent upon the results of the annual reporting of contemporaneous areas and soil analysis (Sec. 3.5.1) and soil sampling described in App. 8 and 9.

### **Findings:**

The information provided in the application meets the requirements of the R645 Coal Rules for Soils Redistribution Plan.

**R645-301-121.100**, After grading, soils will be sampled and analyzed as described in App 9-1, Attach. C. Samples will be analyzed for suitability parameters described in the Utah Guidelines for Topsoil and Overburden. An outdated reference is used in Chap 3, p. 58 which should be updated to read “Table 3 of the 2008 Division Overburden and Soil Handling Guidelines.” [PWB]

## **CONTEMPORANEOUS RECLAMATION**

Regulatory Reference: 30 CFR Sec. 785.18, 817.100; R645-301-352, -301-553, -302-280, -302-281, -302-282, -302-283, -302-284.

### **Analysis:**

## **General**

Section 3.5.1 describes contemporaneous reclamation practices for mine pad outcrops and embankments. Plate 3-7 shows the small areas that have received such treatment. This Plate was revised with this application. The information does not appear to have changed, but the plate is much more legible in electronic form.

The FERTILIZATION portion of section 3.5.1 also states that contemporaneously reclaimed slopes would be evaluated annually for vegetation success and the requirement for fertilization at final reclamation. No changes were made to this section.

## **Findings:**

Information provided meets the requirements of the Coal Rules.

## **STABILIZATION OF SURFACE AREAS**

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

## **Analysis:**

The stockpiled topsoil has been seeded and is protected by a silt fence (Section 3.5.2).

Section 3.5.1 describes interim reclamation of outcrops and embankments, and describes the interim vegetation mix.

The final seed mix is described in Section 9-1. Seed will be hydroseeded with hydromulched (Sec. 3.5.1). In the years since the Trail Mountain reclamation plan was written (1980's), the Division has observed that the incorporation of 1T/ac straw into the surface soil with roughening to a superior technique that should be added to the reclamation plan.

## **Findings:**

The information provided does not meet the requirements of the R645 Coal Rules for Soil Stabilization.

**R645-301-121.100 and R645-301-244.200,** In the years since the Trail Mountain reclamation plan was written (1980's), the Division has observed that the incorporation of 1T/ac straw into the surface soil with roughening to a superior technique that should be added to the reclamation plan. [PWB]

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**RECOMMENDATIONS:**

The revision should include an updated reference to the Division's Topsoil and Overburden Guidelines. In addition, since the reclamation plan was originally written, the Division has observed that the incorporation of 1T/ac straw into the surface soil with roughening to be a superior technique that should be added to the reclamation plan.

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